# DRAFT ENVIRONMENTAL ASSESSMENT

**CONDUCTED AT:**
**NOAA/NOS CENTER FOR COASTAL FISHERIES AND HABITAT RESEARCH**
**101 PIVERS ISLAND ROAD**
**BEAUFORT, NORTH CAROLINA 28516**

**PREPARED FOR:**
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

**PREPARED BY:**
**STOKES ENVIRONMENTAL ASSOCIATES, LTD.**
**PROJECT NUMBER SEA 03-1751.2**
**DRAFT REPORT: 19 JUNE 2003**

Please provide comments by 20 July 2003 to:


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Comments must be received by the end of the 30-day comment period, which ends on 20 July 2003. Every effort will be made to accommodate comments in foreign languages.

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## ACRONYM LIST

APE - Area of Potential Effect
ASML - Above Mean Sea Level
AST - Aboveground Storage Tank
ASTM - American Society of Testing and Materials
AMSD - Applicable Minimum Search Distance
BGS - Below Ground Surface
BLM - Bureau of Land Management
BTU - British Thermal Unit
CAA - Clean Air Act
CCFHR - Center for Coastal Fisheries and Habitat Research
CED - Comprehensive Environmental Data System
CERCLA - Comprehensive Emergency Response, Compensation and Liability Act
CERCLIS - CERCLA Information System
CEQ - Council on Environmental Quality
CICIS - Chemicals in Commerce Information System
CO - Carbon Monoxide
COE - U.S. Army Corps of Engineers
CONSENT - Consent Decrees Database
CORRACTS - Corrective Action Database
CUS - Chemical Update System
CWA - Clean Water Act
CZMA - Coastal Zone Management Act
DOC - U.S. Department of Comerce
DOT - U.S. Department of Transportation
EA - Environmental Assessment
EBCI - Eastern Band of Cherokee Indians
ECOS - Environmental Conservation Online System
EPA - U.S. Environmental Protection Agency
ERNS - Emergency Response Notification System
FAC - Facultative
FACU - Facultative Upland
FEMA - Federal Emergency Management Agency
FFIS - Federal Facility Information System
FIFRA - Federal Insecticide, Fungicide and Rodenticide Act
FINDS - Facility Index System
FONSI - Finding of No Significant Impact
FTTS - FIFRA/TSCA Tracking System
FWS - U.S. Fish and Wildlife Service
FWIS - Fish and Wildlife Information System
GIS - Geographic Information System
HRSD - Hampton Roads Sanitation District
HRMIS - Hazardous Materials Incident Report Subsystem
HSDS - Hazardous Substance Disposal Site

IMD - Incident Management Database
LEED - Leadership Energy and Environmental Design
LUST - Leaking Underground Storage Tank
MINES - Mines Master Index File
MLTS - Material License Tracking System
NAP - Natural Area Preserve
NAPS - NAP System
NCDNH - North Carolina Department of Natural Heritage
NCDAQ - North Carolina Division of Air Quality
NCDCM - North Carolina Division of Coastal Management
NCDEH - North Carolina Department of Environmental Health
NCDENR - North Carolina Department of Environment and Natural Resources
NCDIF - North Carolina Department of Inland Fisheries
NCDMF - North Carolina Department of Marine Fisheries
NCDPR- North Carolina Division of Parks and Recreation
NCDWQ - North Carolina Division of Water Quality
NCNERR - North Carolina National Estuarine Research Reserve
NCWRC - North Carolina Wildlife Resources Commission
NEPA - National Environmental Policy Act
NERR - National Estuarine Research Reserve
NERRS - NERR System
NHL - National Historic Landmark
NHRS - National Heritage Resource System
NFRAP - No Further Remedial Action Planned
NMFS - National Marine Fisheries Service
NNL - National Natural Landmark
NOAA - National Oceanic and Atmospheric Administration
NOS - National Ocean Service
NOx - Nitrogen Oxides
NPDES - National Pollutant Discharge Elimination System
NPL - National Priorities List
NPS - U.S. National Parks Service
NRC - U.S. Nuclear Regulatory Commission
NRCS - U.S. Natural Resources Conservation Service
NRHP - National Register of Historic Places
NRIS - National Register Information System
NWI - National Wilderness Institute
NWPS - National Wilderness Preservation System
NWR - National Wildlife Refuge
NWRS - NWR System
OBL - Obligate Wetland
OLI - Old Landfill Inventory
PADS - PCB Activity Data System
Pb - lead
PCB – Polychlorinated Biphenyls
PCi/L - Pico Curies Per Liter

PCS - Permit Compliance System
PM10 - Particulate Matter Ten Microns
PWS - Public Water System
RAATS - RCRA Administrative Action Tracking System
RCRA - Resource Conservation and Recovery Act
RCRIS - RCRA Information System
RMA - Resource Management Area
ROD - Records of Decision
RPA - Resource Protection Area
SCRC - Submerged Cultural Resource Center
SCS - U.S. Soil Conservation Service
SHPO - State Historic Preservation Office
SIP - State Implementation Plan
SO2 - Sulfur Dioxide
SPILL - Spill Response and Remediation Response Investigation
SSTS - Section Seven Tracking System
THPO - Tribal Historic Preservation Office
TRIS - Toxics Release Inventory System
TSCA - Toxic Substances Control Act
UPL - Upland
USDA - U.S. Department of Agriculture
USDI – U.S. Department of the Interior
USGS - U.S. Geological Survey
USFS - U.S. Forestry Service
UST - Underground Storage Tank
VAS -Voluntary Action Site
VOC - Volatile Organic Compound

# 1.0 EXECUTIVE SUMMARY

## 1.1 Background and Purpose

The National Ocean Service (NOS) provides habitat research and laboratory management and administration operations at the Beaufort Laboratory located on Pivers Island in Beaufort, North Carolina. NOS, a part of the National Oceanic and Atmospheric Administration (NOAA), proposes a project to improve the Beaufort Laboratory, which will modernize the infrastructure and enhance the NOS's ability to support coastal ocean science. The project includes:

- New two-story main laboratory and administration building and parking area;
- Emplacement of a small interpretive kiosk;
- Replacement of the existing 300 foot long automotive access bridge to Pivers Island;
- Upgrade of the existing turtle pen complex to include the seawater supply system;
- Upgrade of the existing northeastern main dock, which will involve removal of two fixed, piling-type finger docks, and installation of floating-type docks in their stead;
- Expansion and upgrade of the existing eastern dock, which will involve three additional dock slips to accommodate the NCNERR boats and removal of three fixed, piling-type docks, and replacement with floating-type docks; and
- Upgrade to the existing northwestern boat ramp, which will include widening and regrading of the ramp, replacement of the seawall, removal of fixed piling-type piers, and installation of floating-type piers.

The new main laboratory and administration building will be constructed in front of the existing laboratory building. The relationship of the two buildings will create a controlled courtyard space around the existing cedar grove, which will remain undisturbed. A small, paved parking area will be provided with space for visitors in front of the building and staff spaces at the end of the building, with a separate, secure entrance. The facility design incorporates green building concepts including the following:

- Stormwater management to reduce non-point source runoff;
- Water efficient landscaping;
- Landscape to reduce heat islands;
- Optimized energy performance;

- Ventilation effectiveness;
- Thermal comfort;
- Daylighting and views;
- Light pollution reduction; and
- Materials with recycled content.

The proposed construction of a main laboratory and administration building will enable reclamation of laboratory space for scientific research in the NOS laboratory building that is currently being used as an office space. The NOS library and administrative functions will be relocated to the new building. Current North Carolina National Estuarine Research Reserve (NCNERR) personnel offices will also be relocated to the new facility and much needed space for public functions serving the missions of both organizations will be provided. NCNERR personnel are currently located in a non-contiguous location at the Duke University Marine Laboratory and are housed in inadequate, non-government facilities.

Current overcrowded conditions require NOS research staff to use functioning laboratory spaces as their office. This provides inadequate office facilities and is detrimental to controlled laboratory environments. Existing conference space is not adequate for current electronic training needs and conferencing systems. Current NCNERR office spaces are inadequate. Space for laboratory and training are currently not available. Spaces necessary to meet NCNERR public meeting requirements are currently not available. The new building will provide the necessary space to enable NOS and NCNERR to perform their mandated functions.

The collocation of NOS and NCNERR will strengthen the partnership between the agencies through shared resources and collaboration. The NCNERR educational staff will help communicate NOS results, directives and missions to various public and management groups. Collocation in the new structure will enhance partnerships with researchers from academic institutions and other federal laboratories.

The proposed small interpretive kiosk will provide both informational and educational displays regarding NOS and NCNERR programs, which will greatly increase the educational contribution to coastal ocean science.

The proposed bridge replacement will replace the existing bridge that is experiencing significant structural deterioration. According to Andrew and Kuske Consulting Engineers, Inc., *Bridge Survey Pivers Island Bridge* (2002), there is a risk of sudden structural failure, which is a safety concern that must be addressed. This bridge has served as the only automotive access to the island for over 35 years.

The proposed upgrade of the existing turtle pen complex and connected seawater supply system will facilitate turtle and other environmental research in support of NOS programs. The existing facilities, built in the late 1920s, are in disrepair and nonfunctional for their purpose at this time.

The proposed upgrade of boat ramps and docks will improve safety and extend the useful life of these assets. These existing facilities are serviceable; however, they were built thirty to sixty years ago, and do not conform to existing safety and access standards, including access for disabled people. The proposed modern facilities will enable NOS and NCNERR to more efficiently accomplish their goals and objectives.

NOAA has prepared this Draft Environmental Assessment (EA) document in conformance with requirements for implementing the National Environmental Policy Act (NEPA) and NOAA Administrative Order 216-6, *Environmental Review Procedures for Implementing the National Environmental Policy Act* (1999). This EA analyzes project-related impacts and the potential for significant environmental impacts to occur to the human environment for the preferred action and the alternative of taking no action. The human environment is defined broadly as the natural and physical environment, and the relationship of people within that environment.

The project has not been a source of controversy on any matter.

NOAA evaluated all feasible alternatives regarding the proposed facility locations, including the no action alternative.

NOAA prepared this Draft EA for review by interested members of the public and government agencies. NOAA will accept written comments on the content of the Draft EA during a 30-day comment period from 20 June 2003 to 20 July 2003. NOAA will evaluate all comments received during the comment period and prepare a Final EA, which will also be available to the public and government agencies. NOAA will not initiate construction of the proposed project until the environmental review has been completed.

## 1.2 Description of Proposed and Alternative Actions

The scope of the proposed undertaking is to design and construct a two-story 17,700 square foot main laboratory and administration building with a footprint of approximately 10,000 square feet. A paved parking area associated with this building will cover an area of approximately 33,000 square feet. The area of land disturbance for this project is estimated to be approximately 45,000 square feet of previously disturbed land. The area to be occupied by the new main laboratory and administration building and paved parking area will be approximately 43,000 square feet. The remaining area, approximately 2,000 square feet will be landscaped. Approximately 800 square feet of this area will be located on what is the island's original boundary, while the remaining square footage will be emplaced on man-made land. (Pivers Island originally comprised the north central, northeastern and northwestern portion of NOAA's property. Man-made land, created from dredge spoil, comprises the south and southwestern portion of NOAA's property.) Please see site sketches and photographs, which are enclosed in the appendix section of this report.

Five locations on the NOAA property were evaluated for construction of the new laboratory and administration building. The location option chosen, which will be in a previously disturbed area of NOAA's property (currently a parking area) will cause little or no cumulative impact with regard to the island and its vicinity. A full analysis of each area is provided within this report. Areas that were considered are:

- Option one would have emplaced the building to the west of the existing parking area and over 96 feet to the southwest of the existing laboratory building;

- Option two would have emplaced the building to the north of the existing parking area and approximately 20 feet to the west of the existing laboratory building;

- Option three would have emplaced the building to the south of the existing parking area and over 208 feet to the south of the existing laboratory building;

- Option four would have emplaced the building to the south of the existing parking area and over 336 feet to the south of the existing laboratory building; and

- Option five would have emplaced the building within the footprint of the existing parking area and approximately 44 feet to the southwest of the existing laboratory building.

The sixth option was chosen because: 1) The structure will be on the highest ground within vacant land available to NOAA; 2) The structure will have a minimal impingement on the 100-year floodplain; 3) The structure will be contiguous with the existing laboratory structure, which will facilitate the desired proximity to other operational areas and also increase safety and security provided by the proximity factor; 4) The structure will be in harmony with the layout of the complex; and 5) The structure will be oriented in such a way as to provide for aesthetics and to take advantage of the solar cycle and the seasonal wind directions.

The scope of work also calls for the emplacement of a small interpretive kiosk with a footprint of no more than 40-foot by 40-foot, which will be located on an existing cleared vacant portion of the property about 20 feet from the eastern shoreline of NOAA's property facing Beaufort Channel.

The site for the proposed emplacement of a small interpretive kiosk, which will be a small display area, was chosen for its view of the Rachel Carson Estuarine Research Reserve and its proximity to existing structures, based on future plans with regard to educational functions. This kiosk will be emplaced on previously disturbed land on the eastern portion of the property fronting Beaufort Channel. As this uninhabited structure will be emplaced within an area occupied by other structures within NOAA's building complex, it is anticipated that there will be no appreciably significant change in lighting, noise, traffic, visibility, or other environmental consequence related to the facility. No alternative action options, other than the no-action alternative, were available for the small interpretive kiosk.

Also included is replacement of an existing automotive access bridge. The new structure will be emplaced immediately to the west of the existing bridge and parallel to the existing bridge. This portion of the project will have similar footprint and features as the current structure, which was constructed in the mid-1960s, replacing the wooden bridge built in the early 1930s. This bridge spans the body of water known as Old Channel, which connects NOAA's property on the northern half of Pivers Island and the causeway between Old Channel and State Route 1205, also known as Old US 70.

A proposed component of these upgrades involves the replacement of the retaining walls and piping system of the existing turtle pen complex to include the seawater supply system. This portion of the project will remain within the same footprint as the current structure that was emplaced in this area in the late 1920s. The existing turtle pens are located on the northern shoreline of NOAA's property facing Old Channel. The existing seawater supply system is located within the channel and is located approximately 96 feet from the shoreline. The upgrade to the turtle pen project and seawater supply involves repair and modification of existing structures. No increase in size of the structures is proposed. There will be no significant change in lighting, noise, traffic, visibility, or other environmental consequence related to the facility. As such, alternatives included technical/design matters, and the no-action alternative.

As part of this proposed project, an upgrade of the northeastern, main dock, which will involve removal of two fixed, piling-type finger docks and installation of floating-type docks in their stead. This portion of the project will remain within the same footprint as the current structure that was first emplaced onsite in the late 1930s. Minimal disturbance of the shoreline, tidal areas and submerged areas will occur as a result in the project area. This project area is located on the northwestern shoreline of NOAA's property, adjacent to the southern bridgehead, facing Old Channel. There will be no significant change in lighting, noise, traffic, visibility, or other environmental consequence related to the facility. As such, alternatives included technical/design matters, and the no-action alternative.

Expansion and upgrade of the eastern dock, which will involve additional docks to accommodate the NCNERR boats and removal of three fixed, piling-type docks and replacement with floating-type docks is also planned a part of this proposed project. This proposed project has not been designed as of the date of this report; however, based on interviews with NOAA, the expansion will remain within the existing facility's footprint. This portion of the project will involve an upgrade of the current structure built in the late 1980s. Minimal disturbance of the shoreline, tidal areas and submerged areas will occur as a result in the project area. This project area is located on the eastern shoreline of NOAA's property facing Beaufort Channel. There will be no significant change in lighting, noise, traffic, visibility, or other environmental consequence related to the facility. As such, alternatives included technical/design matters, and the no-action alternative.

Included within the scope of the proposed project is an upgrade of the northwestern boat ramp and two docks, which will involve removal of two fixed, piling-type docks and replacement with floating-type docks. This portion of the project will remain within the same footprint as the current structure built in the 1970s. Minimal disturbance of the shoreline, tidal areas and submerged areas will occur as a result in the project area. This project area is located on the

northwestern shoreline of NOAA's property, facing Old Channel. There will not be significant change in lighting, noise, traffic, visibility, or other environmental consequence related to the facility. As such, alternatives included technical/design matters, and the no-action alternative.

Because the no-action alternative does not involve construction, no effects on resources in the vicinity would occur under that alternative.

The schedule for the proposed new laboratory and administration building is to begin construction by June 2004 and complete construction by December 2005. The new interpretive kiosk, new vehicle access bridge and upgrade projects (turtle pens with sea water system and boat ramp and docks) will be accomplished after 2005, however, a date has not yet been determined.

As described above, NOAA considered alternative actions for each component of the project. One alternative action for each project component is taking no action, which would be not to proceed with construction of a the new main laboratory and administration building, and not emplacing the interpretive kiosk, or replacing the existing automotive access bridge, or repairing or upgrading the existing turtle pen complex to include the seawater supply system, northern boat ramp, and the existing northeastern and eastern docks. Because the no-action alternative would be not to upgrade and modernize and thereby hinder the NOS's ability to fulfill its mission, NOAA has rejected the no-action alternative.

## 1.3 Environmental Consequences and Mitigation

Implementation of the proposed action has been designed to cause minimal physical change to the environment. During construction, all contractors and employees entering the proposed project area will be subject to applicable federal, state and local regulations governing environmental safety and health statutes and codes.

This proposed project is designed in order to minimize disturbance of previously undisturbed land:

- The entirety of the new laboratory and administration building will be constructed on previously disturbed land. The parking area will be emplaced upon man-made land (dredge material), which resulted from dredge and fill operations conducted in the early 1900s and the late 1960s. Entry into the parking area will be from the existing road, Pivers Island Road.

- The new interpretive kiosk will be constructed on previously disturbed land. Access to this structure will be via an existing unimproved gravel lane.

- The new vehicle access bridge will be constructed adjacent to the existing bridge. The existing bridge will be demolished upon the completion of the new one. The emplacement of the northern bridgehead will be within man-made land (dredge material), which resulted from dredge and fill operations conducted in the early 1900s and the late

1960s. The southern bridgehead will be emplaced on previously disturbed land. The bridge will span the Old Channel, which was previously disturbed during construction of the present bridge, built in the mid-1960s, which replaced the bridge that was constructed in the early 1930s. It appears that this area was also dredged in the early 1900s. This area has been disturbed three times in the in the past 100 years. Based on historic harbor charts (circa 1876 and circa 1908) it appears that the original area of Pivers Island was 8 acres. Based on historic charts, maps, and aerial photographs (1950s through current), the island grew in a southerly direction a result of successive dredge and fill operations within the island's adjacent channels; the island is now 23 acres.

- The existing turtle pens, with sea water system, and boat ramp and docks will be upgraded; however, these will remain within the same footprint as the existing structures. Therefore, activities within these areas will occur on previously disturbed land.

- Non-point source pollution will be controlled during construction by appropriate erosion and sedimentation controls.

- Vegetative buffer zones will be established, via landscaping designed to be in keeping with the North Carolina Coastal Plain. The buffer zones are also designed to minimize sheet runoff from the subject site after the construction phase.

- Natural areas on NOAA's property, such as the beach area located on the eastern portion of the island, the cedar grove in the center of the island, and the swath of land between Pivers Island Road and Bulkhead Channel, will be preserved.

This action would not significantly affect ecological or natural resources within the vicinity of Pivers Island. Construction would remove vegetative cover, pavement or development from approximately 45,000 square feet of land, exposing soil to water and wind erosion. Further, no changes in the location of drainage patterns will result from this proposed project. The project will result in minimal vegetation removal, but no other alteration of a natural ecosystem. Erosion and sedimentation control measures will be incorporated into construction plans and upon completion of construction activities, disturbed areas will be landscaped.

Pivers Island is not located within the vicinity of degraded or impaired airsheds or watersheds, land areas, surface water bodies, geologic formations, or groundwater aquifers.

The proposed project is not a listed categorical source of air emissions, regulated under the North Carolina air regulations, because no boiler system will be installed and, therefore, the facility will not exceed the North Carolina Division of Air Quality (NCDAQ) permit exemption level of 10,000,000 British Thermal Units (BTUs) for emission sources related to heating systems. The facility will not be a source of air emissions exceeding the State of North Carolina permit exemption level of five tons per year of carbon monoxide (CO), oxides of nitrogen (NOX), sulfur dioxide (SO2), particulate matter-ten microns (PM10); volatile organic compounds (VOC), and lead (Pb). As such, an air permit is not required, and the facility will not be inconsistent with the North Carolina State Implementation Plan (SIP) under the Clean Air Act (CAA).

The U.S. Environmental Protection Agency (EPA) has authorized the State of North Carolina to administer the National Pollution Discharge Elimination System (NPDES). As such the Department of Water Quality (NCDWQ) requires a Stormwater Permit for construction activities. All site plans for the proposed project, to include the new main laboratory and administration building, new kiosk, new bridge, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades, must be reviewed by the NCDWQ prior to permitting. Based upon the Civil Design Engineer's consultation with the NCDWQ, the proposed project appears to qualify for the low-density option, as governed by state stormwater regulations, and, therefore, this project is not considered to pose an adverse affect to the environment with regard to non-point source pollution caused by stormwater runoff.

Pivers Island is within the Coastal Zone Management Area, and as such falls under the enforceable polices of the program, which includes fisheries management, wetlands management, dunes management, non-point source pollution control, point source pollution control, shoreline sanitation, air pollution control, and coastal lands management. Advisory policies include coastal natural resource areas, coastal natural hazard areas, waterfront development areas, public beaches, natural areas, wildlife management areas, recreational areas, and historic properties. As such, the North Carolina Division of Coastal Management (NCDCM) requires a Coastal Zone Management Act (CZMA) Consistency Determination and Consistency Certification for the proposed project due to the potential cumulative impact to the coastal environment, both at Pivers Island and its immediate vicinity. As part of the CZMA clearance process, the NCDWQ requires a North Carolina Stormwater Permit for construction, which must be obtained prior to NCDCM clearance. An onsite meeting with the NCDCM, NCDWQ, NOAA's representatives, and the NCNERR is scheduled for 26 June 2003. The Town of Beaufort has been invited to attend the above-mentioned meeting.

The U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) map, *Beaufort Quadrangle, North Carolina* (1990), depicts Pivers Island to be classified as upland (non-wetland). However, the island might include unclassified or unidentified jurisdictional wetlands. The area of the northern bridgehead across the body of water to the north of the island is classified as a jurisdictional wetland (classification E2EMIN; or estuarine, intertidal, emergent, non-persistent). During the site visit of 28 and 29 April 2003, three potential wetland areas were observed. These are: the northern tidal area in the vicinity of the southern bridgehead and the turtle pens (tidal marsh); the area in the vicinity of the docks on the eastern portion of the site (beach); and the land within the immediate vicinity of the northern bridgehead (combination of beach and tidal marsh).

Based on the findings of this investigation, a wetland delineation is required to determine the extent of jurisdictional wetlands within areas of the proposed project. The impact upon wetlands is expected to be low, however, a delineation of these areas is needed to field verify the extent of wetlands at the project site. The wetland determination process will require a comprehensive study, which must be reviewed by the U.S. Army Corps of Engineers (COE). Based upon the COE's decision, wetlands permitting may be required. It is anticipated that any such permitting will be performed using Nationwide permits for minor impacts. Further discussion of wetlands is provided elsewhere in this report.

The Federal Emergency Management Agency (FEMA) flood zone map, *Carteret County, North Carolina, Community Panel Number 3700430708E* (1998), indicates that most of the island is within the 100-year floodplain; Flood Zone AE (elevation of eight-foot/tidal seven-foot). The proposed project is located within the 100-year floodplain, and as such flooding within this area has an elevation of eight-foot. The area of the island considered to be outside of the 100-year floodplain covers a small portion of the eastern part of the island. This small area traverses NOAA's property from north to south. In addition, Carteret County maps depicting flood zones showed the subject site to be within the 100-year floodplain. The dominant source of flooding within the immediate area of the proposed project site is wind driven surge generated in the Atlantic Ocean by tropical storms and hurricanes. The finished floor elevation of the new building will be above the 100-year floodplain. Other considerations will be undertaken as per the U.S. Department of Commerce (DOC) Administrative Order DAO 216-11, *Floodplain Management and Protection of Wetlands* (1979). Design plans will be provided to both Carteret County and Town of Beaufort for review.

According to the FWS, Mr. Dale Suiter, telephone conversation 16 April 2003, the proposed project will not affect endangered and threatened terrestrial species, designated critical habitats, or other natural resources within the vicinity of the proposed project area. However, based upon the FWS clearance letter, dated 19 May 2003, there is a slight chance that the West Indian manatee may occupy waters in the vicinity of Pivers Island. The FWS bases this upon the manatee's migratory range and the existence of habitat conducive to the manatee. The FWS indicates that this manatee species, if present, is a seasonal inhabitant (from June trough the end of September) and as such, steps outlined in the FWS *Precautions for General Construction in Areas Which May be Used by the West Indian Manatee in North Carolina* (undated) must be taken to protect the manatee during construction. Mr. Suiter's letter is enclosed within the appendix section of this report.

According to NOAA, Dr. Jon Hare, email dated 12 May 2003, no endangered and threatened species or designated critical habitats are known to occur either at the site or within the vicinity of the proposed project area. However, sightings of the loggerhead sea turtle *(Caretta caretta)*, the leatherback sea turtle (*Dermocyls coriacea*) and the green sea turtle (*Chelonia mydas*) have been reported within the estuary west of Radio Island and south of the Rachel Carson National Estuarine Research Reserve. Lighting and acoustical effects of activities around the bridgeheads and boat ramps and docks are not to be materially altered by the proposed project, and there will be no change in impacts as a result of this project. Mr. Hare's email is enclosed within the appendix section of this report. The NOAA Protected Species Division was queried via letter on 14 May 2003, and based upon their reply received on 31 May 2003, an impact assessment, dated 9 June 2003, addressing federally listed marine species was forwarded to NOAA for their review. Based upon the absence of federally listed species within the immediate vicinity of Pivers Island, their concurrence is expected. However, as mentioned above, construction activities at shoreline project areas should be undertaken in a manner that reduces acoustical effects.

According to the North Carolina Department of Natural Heritage (NCDNH) through the North Carolina Division of Parks and Recreation (NCDPR), Dr. Harry E. LeGrand, letter dated 2 May

2003, the proposed project will not adversely impact endangered or threatened species, or designated critical habitats. Dr. LeGrand's letter is enclosed within the appendix section of this report. There are no significant natural habitats or priority natural areas on Pivers Island. The proposed project areas for the new main laboratory and administration building and new kiosk will not affect natural heritage resources. The proposed project areas involving replacement and upgrade of existing assets, including bridge replacement, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades, will not directly affect natural heritage resources. While it is possible that the West Indian manatee (*Trichechus manatus)* and sea turtle species could be minimally and indirectly affected by activities involving equipment operation and land disturbance during and immediately after the construction, any such effects would be of so limited duration and intensity as to be extremely unlikely to affect any individuals of these species and is considered to be a *de micromis* condition.

According to a letter received 31 May 2003 from Ms. Georgia Cranmore with the NOAA Protected Species Division, federally listed marine species, which may be present either at Pivers Island or its immediate vicinity, include the: blue whale; finback whale; humpback whale; right whale; sei whale; sperm whale; green sea turtle, hawksbill sea turtle; Kemp's ridley sea turtle; leatherback sea turtle; loggerhead sea turtle; and shortnose sturgeon. In their letter NOAA requested an impact assessment with regard to the above-mentioned marine species. According to NOAA, there are no designated critical habitats located within state waters. The impact assessment requested by NOAA was sent to the Protected Species Division on 9 June 2003. Based on the impact assessment, there appears to be no direct impact to federally listed marine species and NOAA's clearance is anticipated.

According to the North Carolina Wildlife Resources Commission (NCWRC), Mr. David McHenry, letter dated 5 May 2003, the West Indian manatee, the piping plover (*Charadrius melodus melodus*) and the seabeach amaranth (*Amaranthus pumilus*) have been documented in the vicinity of Pivers Island. However, these species do not occur on the island proper or along its immediate shoreline. Also, the eastern painted bunting *(Passerina cris cris)*, which is a federal species of concern, has been recorded within the immediate area of the northern bridgehead. Mr. McHenry's letter is enclosed within the appendix section of this report. The proposed project areas for the new main laboratory and administration building and new kiosk will not affect natural heritage resources. Proposed projects involving repair and upgrade of existing assets, including turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades will not affect natural heritage resources. Prior to construction of the replacement bridge, the area of the northern bridgehead will be monitored for the eastern painted bunting, which may be present at the site from mid-April through the end of September. The timing of work will be modified if necessary to minimize any effects on the eastern painted bunting.

According to the North Carolina Department of Marine Fisheries (NCDMF), Mr. Mike Street, letter dated 28 April 2003, the proposed project will not adversely impact endangered or threatened species, or designated critical habitats. There are no designated nurseries, research sanctuaries or aquaculture operations within the vicinity of the Pivers Island. However, the bridge replacement project could possibly impact a known shellfish (oyster) reef located within the western vicinity (approximately one-quarter of a mile west) of the northern bridgehead. In addition, shellfish and seagrass habitats may be located in unmapped areas around Pivers Island.

The proposed project areas for the new main laboratory and administration building and new kiosk will not affect natural heritage resources. Further consultation will be required with regard to shellfish and seagrass habitats, which may be present within the proposed project areas involving replacement and upgrade of existing assets, including bridge replacement, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades. Mr. Street's letter is enclosed within the appendix section of this report. NOAA is currently mapping the shellfish and seagrass beds within the vicinity of the proposed project areas.

According to the Rachel Carson NCNERR, Ms. Susan Lovelace, telephone conversation 5 May 2003, federally listed endangered or threatened species, specifically the West Indian manatee, Kemp's ridley sea turtle *(Lepidochelys kempii)*, shortnose sturgeon *(Acipenser brevirostrum),* American alligator *(Alligator mississippiensis*), loggerhead sea turtle, piping plover, seabeach amaranth, and seabeach knotweed *(Polygonum glaucum)*, do not occur on Pivers Island. The island and its immediate vicinity are not known basking areas for sea turtle species. However, sea turtle species are known to feed in the estuary, and juveniles may venture into the channels around the island.

Based on the results of the investigation, it is our opinion that the proposed project will not adversely affect the threatened and endangered species or related critical habitats, which were specifically mentioned in clearance letters issued by state agencies.

Based on review of appropriate databases, maps and land deeds, coupled with both federal and state agency review, and interviews it appears that the proposed project is not located in an officially designated wilderness or natural area preserve, wildlife preserve or wildlife refuge, national estuarine reserve or coastal reserve, aquiculture protection area or agricultural reserve area, national seashore or wild and scenic river, national or state natural landmark, significant landscape, natural areas or open spaces, or other conservation areas. As such, no further investigation regarding the above-mentioned natural resources is warranted at this time.

According to the National Registry of Historic Places (NRHP), Beaufort Historic District (NRHP #1974-05-06) is located across Beaufort Channel from the subject site. Within this district are specifically listed historic resources: the Jacob Henry House (NRHP #1973-03-07); the Gibbs House (NRHP #1973-03-14); and the Old Burying Ground (NRHP #1974-05-08). However, based on the distance between the resource and the proposed project, as well as existing surface features and conditions between the resource and the proposed project, there appears to be no potential for adverse aesthetic or physical effect on any historic resources in the vicinity with regard to the new main laboratory and administration building because the new building will not be visible from the nearby historic properties. However, the bridge, boat ramps, and boat docks are visible from the western portion of the historic district and are also visible from the Jacob Henry House located in the southwestern portion of the district. The upgraded and repaired facilities are to be of similar design, lighting, and visual appearance to the existing facilities, and would be expected to result in no significant change in visual impact on the nearby historic properties. Coordination with both Carteret County and the Town of Beaufort will be accomplished with regard to lighting or other features, which may be within the viewshed of the historic district for the new kiosk, new bridge, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades.

According to the NCDCR, SHPO, Ms. Renee Gledhill-Earley, telephone conversation 19 May 2003, the proposed project will not affect either archeological or historic properties, or other cultural resources within the vicinity of the proposed project area. The NCDCR clearance letter , dated 16 May 2003, is enclosed in the appendix section of this report.

According to the Beaufort Historic Association, Ms. Patricia Suggs, telephone conversation on 17 April 2003, the proposed project will have no affect on the Beaufort Historic District, which is listed on the NRHP (file #1974-05-06), or other historic or cultural resources within this district.

Based on the results of this investigation, it is our opinion that the proposed project will not adversely affect the historic or cultural resources, either on land or under water.

According to the Bureau of Indian Affairs (BIA), one federally recognized Indian tribe, the Eastern Band of Cherokee Indians (EBCI), exists within the State of North Carolina. According to EBCI the Carteret County is not considered to be within the EBCI's aboriginal territory. According to Mr. James Bird, EBCI Tribal Historic Preservation Officer, letter dated 16 July 2001, the EBCI Tribal Historic Preservation Office (THPO) indicated that the EBCI has no interests in the North Carolina Coastal Plain or purview to the coastal areas of the state. Mr. Bird's letter dated 16 July 2001 is enclosed within the appendix section of this report. This was confirmed with Ms. Lee Clauss via telephone interview on 7 May 2003.

The EBCI THPO, Ms. Lee Clauss, telephone conversation 7 May 2003, suggested contacting the Catawba Indian Nation. Although the Catawba Indian Nation is not considered to have aboriginal territory in the State of North Carolina, they are a coastal plain nation and are federally recognized.

The Catawba Indian Nation was queried via letter, dated 7 May 2003, with regard to historic and cultural resources within the vicinity of the proposed project area. Follow-up on 9 May 2003 with the TPHO, Dr. Wenonah G. Haire (Tribal Historic Preservation Officer) indicated an interagency review of the project is in progress. In order to complete the review, the TPHO requested additional information on 10 June 2003. SEA, Ltd., provided requested documentation on 13 June 2003 and historic and cultural resources assessment on 16 June 2003. The Catawba Indian Nation's reply has not been received as of the date of this report.

Based on the above research, Native American historic and cultural sites were not found within the proposed site or immediate vicinity of the subject site, and it appears that the proposed action will not affect any Native American religious sites. However, a clearance letter from the Catawba Indian Nation is pending.

Investigation based on review of appropriate databases, maps and land deeds, coupled with both federal and state agency review, and interviews it appears that the proposed project is not located in an officially designated national or state historic landscape, battlefield, or other historic or cultural resource.

Review of regulatory databases did not indicate adverse environmental conditions at the subject site or its immediate vicinity.

According to NOAA records, the subject site is zoned industrial and is consistent with land use within the immediate vicinity, and the proposed facility will be consistent with the official municipal land use plan as outlined in the *Town of Beaufort Strategic Approach for Growth* (1999). Land use in the immediate vicinity to the north, across Old Channel, and to the east, across Gallants Channel, which encompasses the Town of Beaufort, is mixed commercial, residential and maritime. Land use to the south is dedicated to the Rachel Carson NCNERR, while land use to the west, across Bulkhead Channel, on Radio Island is mixed commercial, residential and maritime. According to the Town of Beaufort, the proposed project will have no negative impact on either sociocultural or socioeconomic factors.

As the NOAA property is a federal property, currently there are federal facilities onsite. The proposed project will be funded via federal monies. Funds have already been appropriated for the new laboratory and administration building. Construction will not begin until all public comments have been received and reviewed, and the NEPA process is completed.

## 1.4 Cumulative Effects

Based on the analysis contained within this report, which was accomplished using guidance provided by the Council on Environmental Quality (CEQ), *Considering Cumulative Effects* (1997), and given the current land use within the Pivers Island vicinity, cumulative effects of the project both onsite and within its vicinity are considered minimal, for the reasons described below. The proposed new main laboratory and administration building will be used by personnel currently onsite. This additional facility will not be cause for an increase in staffing; therefore, traffic to and from the island should remain at approximately 98 round-trips per day. The number of round trips per day was estimated based on a five-day workweek.

A private development of condominiums is currently under construction on Radio Island, located approximately 2,000 feet across Bulkhead Channel to the west of Pivers Island. One portion of the site development is completed, however, one other section will be developed in the near future. This residential area also had an associated marina. According to personnel at the Town of Beaufort, the Town's council approved this project and required regulatory guidelines were complied with during the construction phase. The proposed NOAA facilities will have no adverse cumulative effect on this development.

Development within the Town of Beaufort, located to the east across Beaufort Channel from Pivers Island, is limited, based on its designation as a historic district listed in the National Register of Historic Places (NRHP). Likewise, development of areas to the east and southeast of Pivers Island is limited because this area is designated as the Rachel Carson North Carolina National Estuarine Research Reserve (NCNERR). The proposed NOAA facilities will have no adverse cumulative effect on these areas.

Areas to the northwest and northeast are a combination of residences and marinas with State Route 1205, also known as Old US 70, running from west to east along the causeway between Morehead City, located to the west, and Beaufort, located to the east. Based on the state right-of-way along this corridor, development is limited.

The CEQ methodology addressing the project's scope, affected environment, and environmental consequences resulted in a finding of low impact during the construction phase and very low to no long-term impact with regard to the natural and human environment both on NOAA's property or its immediate vicinity. This assessment was conducted from the larger geophysical province down to the subject site itself to ascertain how the project would be affected by conditions within these areas. The assessment also took into consideration how the proposed project would affect NOAA's property, Pivers Island, the Town of Beaufort, Carteret County, the White Oak Watershed, and the North Carolina Coastal Plain. This assessment coupled with consultation with federal, state and local agencies regarding natural resources, ecosystems, and human communities of concern within the vicinity of the proposed project area, indicates that the proposed project will have low impact during the construction phase and very low to no long-term impact either at NOAA's property or within the vicinity of Pivers Island.

## 1.5 Findings

The findings of this Draft NEPA EA include all research, and comments obtained from agency queries and interviews. No negative comments were recorded. Agency and public comments will be incorporated into future revisions of this EA, culminating with the Final NEPA EA.

Based on empirical research, federal and state databases and interviews, it is our opinion that the proposed project will receive favorable comment from federal, state and local reviews leading to clearance for the project as proposed by NOAA.

Based on the research and analysis conducted during this NEPA environmental assessment, it is concluded that implementation of the proposed action, alternative action, or no-action alternatives would not result in significant individual or cumulative environmental effects. Preparation of a Finding of No Significant Impact (FONSI) is warranted for the proposed alternative.

# 2.0 INTRODUCTION

The National Ocean Service (NOS), within the National Oceanic and Atmospheric Administration (NOAA), provides habitat research and laboratory management and administration operations at the Beaufort Laboratory located on Pivers Island in Beaufort, North Carolina.

The NOAA NOS serves as the Nation's principal advocate for coastal and ocean stewardship through management, response, restoration, and navigation of coastal ecosystems. This is done through the development of the National Foundation for Coastal and Ocean Science and involves partners at all levels. NOS's mission is to develop and provide access to reliable and sound scientific information and understanding of coastal systems, human use issues, and interactions among natural systems and humans primarily for the effective management and stewardship of the nation's coastal ecosystem.

A closely associated component of NOAA's research efforts is the National Estuarine Research Reserve System (NERRS), which was established in 1972 as part of the Coastal Zone Management Act of the same year. This program helps to fulfill NOAA's stewardship mission to sustain healthy coasts by improving the nation's understanding and stewardship of estuaries. Both NOAA and the State of North Carolina conduct research at the Rachel Carson NCNERR (established in 1982), which is considered a living laboratory covering an area of approximately 2,675 acres and includes Carrot Island, Town Marsh, Bird Shoal, Horse Island, and contiguous portions of Beaufort Channel, Beaufort Inlet, Back Sound, and North River Channel.

The proposed project is part of the Beaufort Laboratory improvements, which will modernize the infrastructure and enhance the NOS's ability to support marine fisheries research.

The project includes a single building, which will be constructed in front of the existing laboratory building. The relationship of the two buildings will create a controlled courtyard pace around the existing cedar grove, which will remain undisturbed. A small, paved parking area with visitor spaces will be provided in front of the building, and staff spaces at the end of the building, with a separate, secure entrance. The facility design incorporates many of the green building concepts, thus making it an environmental friendly structure. The new laboratory and administration building has been funded.

The project also includes emplacement of a small interpretive kiosk, replacement of an existing automotive access bridge; upgrade of the existing turtle pen complex to include the seawater supply system; upgrade to the existing northwestern boat ramp, which will involve widening and re-grading the ramp and replacing the adjacent seawall, removal of fixed piling-type piers and installation of floating-type piers; upgrade of the existing northeastern, main dock, which will involve removal of two fixed, piling-type finger docks and installation of floating-type docks in their stead; and expansion and upgrade of the existing eastern dock, which will involve removal of three fixed, piling-type docks and replacement with floating-type docks. Funds have not yet been appropriated for any of these items.

Construction of the new building is scheduled to take place from June 2004 through December 2005. The other items, which are currently not funded, will begin following the receipt of appropriated funds, and will most likely be completed later than December 2005.

This EA has been prepared in conformance with requirements for implementing the NEPA with procedures documented in NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act. This EA analyzes project-related impacts and the potential for significant environmental impacts to occur to the human environment for the preferred action and the alternative of taking no action. The human environment is defined broadly as the natural and physical environment and the relationship of people with that environment. The alternative action and no-action alternatives are also analyzed for comparison purposes.

Cumulative impacts were analyzed using guidance provided by the Council on Environmental Quality (CEQ), *Considering Cumulative Effects* (1997). The methodology outlined within the guidance document facilitates comprehensive evaluation of cumulative effects of combined actions relative to thresholds of concerns for resources or ecosystems. In considering cumulative effects the CEQ recommends analysis with regard to the below-mentioned areas.

- Project scoping, which includes past, present and future actions of federal, non-federal and private actions within the immediate vicinity of the proposed project site.

- Affected environment, which focuses on each affected resource, ecosystem and human community within the immediate vicinity of the proposed project site.

- Environmental consequences, which addresses additive, countervailing and synergistic effects of the proposed project.

Comments on this Draft EA have been sought from NOAA staff, during a preliminary internal review and comment period. The Draft EA has been updated to reflect written comments received from NOAA via their interagency review. The successive EA reports (Draft EA and Preliminary Final EA) will also undergo review, with the Draft EA being made available for both public and government agency review. Comments will be incorporated into successive reports culminating with the Final EA. Based on the Final EA, NOAA will make determination regarding whether to implement the proposed action.

# 3.0 PURPOSE AND NEED

The NOS, within NOAA, provides habitat research and laboratory management and administration operations at the Beaufort Laboratory located on Pivers Island in Beaufort, North Carolina. The proposed project is part of the Beaufort Laboratory improvements, which will modernize the infrastructure and enhance the NOS's ability to support marine fisheries research.

The proposed main laboratory and administration building will enable reclamation of laboratory space for scientific research in the NOS laboratory building that is currently being used as a makeshift office space. The NOS library and administrative functions will be relocated to the new building. Current NCNERR spaces will also be relocated to the new facility and much needed space for public functions serving the missions of both organizations will be provided. NCNERR personnel are currently located in a non-contiguous location at the Duke University Marine Laboratory and are housed in inadequate, non-government facilities.

Current overcrowded conditions require NOS research staff to use functioning laboratory spaces as their office. This provides inadequate office facilities and is detrimental to controlled laboratory environments. Existing conference space is not adequate for current electronic training needs and conferencing systems. Current NCNERR office spaces are inadequate. Space for laboratory and training are currently not available and nor are the spaces necessary to meet NCNERR public meeting requirements.

The collocation of NOS and NCNERR will strengthen the partnership between the agencies through shared resources and collaboration. The NCNERR educational staff will help communicate NOS results, directives and missions to various public and management groups. It will enhance partnerships with researchers from academic institutions and other federal laboratories.

Other portions of this proposed project are planned as part of the overall modernization of the Beaufort Laboratory operation.

The site for the proposed emplacement of a small interpretive kiosk, which will be a small display area and not an occupied building, was chosen for its view of the Rachel Carson NCNERR, proximity to existing structures and based on future plans with regard to educational functions. This structure will provide both informational and educational displays regarding NOS and NCNERR programs.

The current automotive access bridge has served the island for over 35 years and the replacement will enable continued road access to the NOAA and Duke Laboratories for another 35 years or more.

The proposed upgrade of the existing turtle pen complex and connected seawater supply system will facilitate tidal research in support of NOS programs.

The proposed upgrade of a boat ramp and docks will improve safety and extend the useful life of these assets, and provide permanent space for the NCNERR boats.

Completion of this proposed project is critical to the continued support of NOAA's NOS Center for Coastal Fisheries and Habitat Research (CCFHR), which is one of four national research facilities in the NOS's National Center for Coastal Ocean Science. The Beaufort Laboratory has continually advanced the scientific frontiers within its various specific areas of endeavor, and as such modernization of the laboratory complex will enable the CCFHR to continue providing the highest standard of scientific research in the future.

## 3.1 The Beaufort Laboratory Background

The NOAA NOS serves as the Nation's principal advocate for coastal and ocean stewardship through management, response, restoration, and navigation of coastal ecosystems. This is done through the development of the National Foundation for Coastal and Ocean Science and involves partners at all levels. NOS's mission is to develop and provide access to reliable and sound scientific information and understanding of coastal systems, human use issues, and interactions among natural systems and humans primarily for the effective management and stewardship of the nation's coastal ecosystem. Coastal fisheries and habitat research is conducted from the Chesapeake Bay to Puerto Rico on the east coast, the west coast of Florida and the Mississippi River plume in the Gulf of Mexico, and in San Diego and San Francisco bay on the west coast.

The NOAA Beaufort Laboratory, Center for Coastal Fisheries and Habitat Research (CCFHR), is one of four national research facilities within the NOS National Centers for Coastal Ocean Science system. The operation is managed by the NOS.

The U.S. Commission of Fish and Fisheries established the Beaufort Laboratory on Pivers Island, in Beaufort, North Carolina, in 1899 (this is second oldest federal marine laboratory in the United States). This laboratory occupied the entirety of Pivers Island since 1902 and was charged with the study of questions pertaining to fish-culture, fisheries and marine biology. Most research in the formative years was conducted in adjacent waters. However, from the first decade through the 1930s the Beaufort Laboratory undertook a monumental propagation effort for the purpose of restoring diamondback terrapins of the Chesapeake Bay and also was successful in introducing these terrapins to wildlife refuges located in North Carolina, South Carolina and Georgia.

The early years of the Beaufort Laboratory also saw extensive fisheries studies involving scallop, oysters and other shellfish, which led to the pioneering work in the 1930s and 1940s involving scallop and oyster reef restoration. In the 1920s, groundbreaking biological research led to the first successful rearing of several fish through the larval stage, and during the 1930s and 1940s numerous studies were accomplished, which led to the understanding of early life histories of fish.

Many other significant advances in marine biology were attained from programs. For example, the blue crab program, which began in the early 1950s, enabled the proper management of this crab species. The shad program, which also began in the early 1950s, led to the development of numerous fishways on the east coast of the United States, enabling shad to migrate into upstream reaches of rivers that had been blocked by dams and other structures. Other programs such the stripped bass and menhaden programs, which began in the mid-1950s, led to restoration of these fish species to the estuary over the next few decades. Other anadromous fish and reef fish programs involving significant restoration efforts began in the late 1980s. The 1980s also saw an increase in protected species research.

In 1999, the Beaufort Laboratory was transferred from the NMFS to the NOS, which has continued research in estuarine ecology.

Currently, the laboratory complex occupies the northern half of the island (the southern half of the island has been created in successive dredge and fill operations conducted in the first decade of the 1900s and the late 1960's in Beaufort Channel located to the east of the island). NOAA's property includes the northern half of Pivers Island (approximately 11.5 acres), the parcel of land between Old Channel and State Route 1207, also known as Old US 70 (approximately 4.5 acres), and the automotive access bridge, also known as the Pivers Island Bridge. Pivers Island Road runs from State Route 1207 to the north of the island to the Duke University Marine Laboratory property located on the southern half of the island.

A closely associated component of NOAA's research efforts are the National Estuarine Research Reserve System (NERRS), which was established in 1972 as part of the Coastal Zone Management Act of the same year. This program helps to fulfill NOAA's stewardship mission to sustain healthy coasts by improving the nation's understanding and stewardship of estuaries. Both NOAA and the State of North Carolina conduct research at the Rachel Carson NCNERR, which is considered a living laboratory. This reserve was established by the State of North Carolina in 1982 with matching funds from NOAA. Reserve staff members work with local communities and regional groups to address natural resource management issues within the estuary, where freshwater from the Newport River and other tributaries mix with saltwater from the Atlantic Ocean. Examples of such natural resources management issues include non-point source pollution, habitat restoration and invasive species. Through integrated research and education, the reserve helps communities develop strategies to deal successfully with these coastal resource issues.

The Rachel Carson NCNERR covers an area of approximately 2,675 acres and includes Carrot Island, Town Marsh, Bird Shoal, Horse Island, and contiguous portions of Beaufort Channel, Beaufort Inlet, Back Sound, and North River Channel.

Currently, the operational staff comprises approximately 90 personnel. Facilities include biological, physiological and chemical laboratories, a fully-controlled seawater system, computer and geographic information system (GIS) facilities, and a library. The operation also has a 48-foot research vessel. The Beaufort Laboratory is responsible for research on determining the distribution and role of habitats in the health and production of invertebrates and fisheries species; research on harmful algal blooms; evaluation of the population dynamics and size of

stocks of reef fishes and some highly migratory fish species; distribution and assessment of human interactions with marine mammals and sea turtles; and the effects of coastal habitat degradation on and the restoration of both habitats and fisheries. Information obtained through activities at the laboratory is distributed to managers within NOAA and other federal and state agencies for use in their efforts to protect living marine resources.

The Town of Beaufort was established in 1709, and is currently within Carteret County, which is situated in one of the fastest growing areas of eastern North Carolina.

## 3.2 Decisions to be Made

This EA supports NOAA's decision-making process related to the proposed project. Specifically, the decisions to be made by NOAA are:

- Whether to authorize construction of the proposed facilities; or
- Opt for the no-action alternative.

## 3.3 Permits and Consultation Required

To support NOAA in making the decisions identified above, the applicant has identified the following necessary permits or consulted with the following agencies:

- The North Carolina Department of Water Quality (NCDWQ) requires a Stormwater Permit for construction activities. All site plans for the proposed project to include the new main laboratory and administration building, new kiosk, bridge replacement, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades, must be reviewed by the NCDWQ prior to permitting. Based on the low impact of construction phase activities at areas designated for the new building and kiosk and the repair and upgrade of shoreline structures, which have been in place for 30 years or more, it appears that the proposed project will qualify for the necessary stormwater permits for construction activities. In addition, based upon the Civil Design Engineer's consultation with the NCDWQ, the proposed project appears to qualify for the low-density option, as governed by state stormwater regulations, and, therefore, this project is not considered to pose an adverse affect to the environment with regard to non-point source pollution caused by stormwater runoff.

- Pivers Island is within the Coastal Zone Management Area, and as such falls under the enforceable polices of the program, which includes fisheries management, wetlands management, dunes management, non-point source pollution control, point source pollution control, shoreline sanitation, air pollution control, and coastal lands management. As such, the North Carolina Division of Coastal Management (NCDCM) requires a Coastal Zone Management Act (CZMA) Consistency Determination and Consistency Certification for the proposed project due to the potential cumulative impact

to the coastal environment, both at Pivers Island and its immediate vicinity. Based on a review of land usage within the vicinity of Pivers Island, it is anticipated that the proposed project is consistent with current and future land uses in Carteret County and the Town of Beaufort. Also, based on the low impact of construction phase activities at the upland areas designated for the new building and kiosk and the replacement and upgrade of shoreline structures, which have been in place for 30 years or more, it is anticipated that the proposed project will be found to be consistent with the North Carolina Coastal Zone Programs. An onsite meeting with the NCDCM, NCDWQ, NOAA's representatives, and the NCNERR is scheduled for 26 June 2003. The Town of Beaufort has been invited to attend the above-mentioned meeting.

- As part of the CZMA clearance process, the NCDWQ requires a North Carolina Stormwater Permit for construction, which must be obtained prior to NCDCM clearance. Based on the size of the proposed new main laboratory and administration building, including the buildings proposed paved parking area, the project may be required to have a state stormwater permit. Permitting for construction activities will be required for each area of the project, to include the new main laboratory and administration building, new kiosk, bridge repair, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades. As mentioned above, based on the low impact of construction phase activities and the apparent low-density development category of the proposed project, it appears that the proposed project qualify for coverage under the State of North Carolina Stormwater Permit for construction activities.

- The U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) map, *Beaufort Quadrangle, North Carolina* (1990), depicts Pivers Island to be classified as upland (non-wetland). However, the island might include unclassified or unidentified jurisdictional wetlands. The area of the northern bridgehead across the body of water to the north of the island is classified as a jurisdictional wetland (classification E2EMIN; or estuarine, intertidal, emergent, non-persistent). During the site visit of 28 and 29 April 2003, three potential wetland areas were observed. These are: the northern tidal area in the vicinity of the southern bridgehead and the turtle pens (tidal marsh); the area in the vicinity of the docks on the eastern portion of the site (beach); and the land within the immediate vicinity of the northern bridgehead (combination of beach and tidal marsh). Based on the findings of this investigation, a wetland delineation is required to determine the extent of jurisdictional wetlands within areas of the proposed project. The wetland determination process will require a comprehensive study, which must be reviewed by the U.S. Army Corps of Engineers (COE). Based upon the COE's decision, wetlands permitting may be required. It is anticipated that any such permitting will be performed using Nationwide permits for minor impacts. A wetland delineation is scheduled the week of 23 June 2003.

- The Federal Emergency Management Agency (FEMA) flood zone map, *Carteret County, North Carolina, Community Panel Number 3700430708E* (1998), indicates that a portion of the subject site is located within a floodplain (100-year floodplain). The site is located in Flood Zone AE (elevation of eight-foot/tidal seven-foot). In addition, Carteret County maps depicting flood zones showed the subject site to be within the 100-year floodplain,

with the dominant source of flooding within the immediate area of the proposed project site is wind driven surge generated in the Atlantic Ocean by tropical storms and hurricanes. The designers will coordinate with both Carteret County and the Town of Beaufort. The finished floor elevation of the new building will be above the 100-year floodplain.

- Mr. Dale Suiter, with the U.S. Fish and Wildlife Service (FWS), indicated in his letter, dated 19 May 2003, that there may be a slight chance that the West Indian manatee may occupy waters in the vicinity of Pivers Island. The FWS bases this upon the manatee's migratory range and the existence of habitat conducive to the manatee, however, there are no documented cases of this manatee species within the vicinity of Pivers Island. The FWS indicates that this manatee species, if present, is a seasonal inhabitant (from June through the end of September) and as such, steps outlined in the FWS *Precautions for General Construction in Areas Which May be Used by the West Indian Manatee in North Carolina* (undated) must be taken to protect the manatee during construction.

- Mr. David McHenry, with the North Carolina Wildlife Resources Commission (NCWRC), indicated in his letter dated 5 May 2003, that the eastern painted bunting *(Passerina cris cris)*, which is a federal species of concern, has been recorded within the immediate area of the northern bridgehead. Prior to construction of the replacement bridge, the area of the northern bridgehead will be monitored for the eastern painted bunting, which may be present at the site from mid-April through the end of September. The timing of work will be modified if necessary to eliminate any effects on the eastern painted bunting.

- Mr. Mike Street, with the North Carolina Department of Marine Fisheries (NCDMF), indicated in his letter dated 28 April 2003, the bridge replacement project could possibly impact a known shellfish (oyster) reef located to the west of the northern bridgehead. (This reef is located approximately one-quarter of a mile west of the existing vehicle access bridge.) In addition, shellfish and seagrass habitats may be located in unmapped areas around Pivers Island. With regard to shoreline portions of the project, these areas should be surveyed for shellfish and seagrass habitats prior to construction. Further consultation will be required with regard to shellfish and seagrass habitats, which may be present within the proposed project areas involving replacement and upgrade of existing assets, including bridge replacement, turtle pen and seawater supply system upgrades, and boat ramp and dock upgrades. NOAA is currently mapping the shellfish and seagrass beds within the vicinity of the proposed project areas.

- The National Registry of Historic Places (NRHP), Beaufort Historic District (NRHP #1974-05-06) is located across Beaufort Channel from the subject site. Clearance for the project has been given by the North Carolina Department of Cultural Resources (NCDCR) State Historic Preservation Office (SHPO). However, coordination with both Carteret County and the Town of Beaufort should be accomplished with regard to lighting or other features, which may affect the aesthetics of the historic district for the new kiosk, new bridge, turtle pen and associated seawater supply system upgrades, and boat ramp and dock upgrades.

## 3.4 Statutory Basis

This EA was conducted in accordance with requirements of NEPA (42 U.S.C. 4321 *et seq.*), regulations of the Council on Environmental Quality (40 CFR 1500-1508), and NOAA Administrative Order 216-6 (NAO 216-6).

Accordingly, the purposes of this EA are to:

- Determine whether the proposed action might have significant effects on the environment, and whether more detailed study of those effects would be warranted
- Identify and describe in detail potential mitigation measures that would be required of the applicant
- Review alternative courses of action